

RECEIVED

APR 22 2002
SHEET 1 OF 6INFORMATION DISCLOSURE
CITATION

PTO-1449

ATTORNEY'S DKT No.
028870-178TEC APPLICANT NO. 1600/2900
09/560,475APPLICANT
David C. Greenspan et al.FILING DATE
April 28, 2000GROUP
1755

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
<i>[Signature]</i>	6,086,374	Jul.2000	Litkowski et al.			
	6,083,521	Jul.2000	Acemoglu et al.			
	5,990,380	Nov.1999	Marotta et al.			
	5,840,290	Nov.1998	Hench et al.			
	5,834,008	Nov.1998	Greenspan et al.			
	5,807,641 <i>Sep 1998</i>	Aug.1998	Oku et al.			
	5,766,611	Jun.1998	Shimono et al.			
	5,753,251	May1998	Burrell et al.			
	5,728,753	Mar.1998	Bonfield et al.			
	5,696,169	Dec.1997	Otsu et al.			
	5,681,872	Oct.1997	Erbe			
	5,681,575	Oct.1997	Burrell et al.			
	5,648,301	Jul.1997	Ducheyne et al.			
	5,591,453	Jan.1997	Ducheyne et al.			
	5,536,614	Jul1996	Kondo et al.			
	5,501,706	Mar.1996	Arenberg			
	5,410,016	Apr.1995	Hubbell et al.			
	5,352,715	Oct.1994	Wallace et al.			
	5,340,776	Aug 1994	Paschke et al.			
	5,298,260	Mar.1994	Viegas et al.			
	5,290,544	Mar.1994	Shimono et al.			
✓	5,263,992	Nov.1993	Guire			
	5,126,141	Jun.1992	Henry			

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



RECEIVED

SHEET 2 OF 6

INFORMATION DISCLOSURE
CITATION

PTO-1449

ATTORNEY'S DKT No.
028870-178APR 22 2002
APPLICATION No.
09/560,475APPLICANT
David C. Greenspan et al.

TECH CENTER 1600/2900

FILING DATE
April 28, 2000GROUP
1755

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLAS S	FILING DATE
slp	5,068,122	Nov.1991	Kokubo et al.			
	5,017,627	May1991	Bonfield et al.			
	5,000,746	Mar.1991	Meiss			
	4,851,046	Jul.1989	Low et al.			
	4,837,285	Jun.1989	Berg et al.			
	4,788,642	Nov.1988	Suzuki et al.			
	4,613,502	Sep.1986	Turková et al.			
	4,605,415	Aug.1986	Richez			
	4,599,209	Jul.1986	Dautzenberg et al.			
	4,539,200	Sep.1985	Quarfoot			
	4,538,603	Sep.1985	Pawelchak et al.			
	4,303,066	Dec.1981	D'Andrea			
	4,272,518	Jun.1981	Moro et al.			
	4,103,002	Jul.1978	Hench et al.			

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
	00/66086	Nov.2000	WO (PCT/US00/11585)				
	99/13582	Mar.1999	WO				
	98/11853	Mar.1998	WO (PCT/US97/16732)				
	97/17401	Mar.1994	WO (PCT/US96/17939)				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

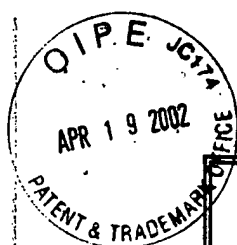
	Aydin, M., et al, "Deposition Profile of Antibacterial Anodic Silver in Root Canal Systems of Teeth", <i>J. Biomed. Mater. Res.</i> , 38(1):49-54, (John Wiley & Sons, Inc.) 1997.
Not relevant recessive	Barrett, E. P., et al., "The Determination of Pore Volume and Area Distributions in Porous Substances. I. Computations from Nitrogen Isotherms", <i>J. Am. Chem. Soc.</i> , 73:373-380 (American Chemical Society) 1951.
	Bergna, H.E., "The Colloid Chemistry of Silica", <i>Advances in Chemistry</i> , Series 234 (American Chemical Society, Washington, DC) 1994.

EXAMINER

DATE CONSIDERED

6/19/02

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

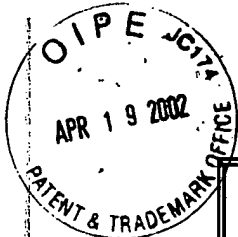


RECEIVED

APR 22 2002 SET 3 OF 6

INFORMATION DISCLOSURE CITATION		ATTORNEY'S DKT NO. 028870-178	TECH APPLICATION NO. 09/560,475
PTO-1449		APPLICANT David C. Greenspan et al.	
		FILING DATE April 28, 2000	GROUP 1755
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
✓	Not relevant	Bosetti, M., et al., "Effects of Bioactive Glass on Macrophages Activation", <i>Bioceramics</i> , 11: 319-322, (Word Scientific Pub. Co.) 1998.	
✓		Brinker, C. J., et al., "The Physics and Chemistry of Sol-Gel Processing", <i>Sol-Gel Science</i> , 8: 499-503 (Academic Press, Inc.) 1990.	
✓		Brinker, C. J., et al., "The Physics and Chemistry of Sol-Gel Processing", <i>Sol-Gel Science</i> , 3: 115-119 (Academic Press, Inc.) 1990.	
✓	Not relevant	Brunauer, S., et al., "Adsorption of Gases in Multimolecular Layers", <i>J. Am. Chem. Soc.</i> , 60: 309-319 (Published Monthly by the American Chemical Society) Feb., 1938.	
✓	Missing	Carlisle, E. M., "Silicon Biochemistry, Silicon as an Essential Trace Element in Animal Nutrition", <i>Ciba Foundation Symposium 121</i> , 123-139 (John Wiley and Sons, New York) 1986.	
		Cartmell, S. H., et al., "Soft Tissue Response to Glycerol-suspended Controlled-release Glass Particulate," <i>J. Mat. Science: Mat. in Med.</i> , 9: 773-777 (Kluwer Academic Publishers) 1998.	
		Coleman, J. J., et al., "Mandibular Reconstruction with Composite Microvascular Tissue Transfer", <i>Medline, (Abstract) #91023289</i> , 1991.	
		Freed, J. S., "Use of Injectable Biomaterials for the Repair and Augmentation of the Anal Sphincter", <i>Chemical Abstract</i> , 119: #195701, 1993.	
		Fung, M. C. et al., "Silver Products for Medical Indications: Risk-Benefit Assessment", <i>J. Toxicol.</i> , 34(1): 119-126 (American Academy of Clinical Toxicology and European Association of Poisons Centres and Clinical Toxicologist) 1996.	
		Goldman Sachs/U.S. Research, "Advanced Tissue Sciences, (ATS)", (Healthcare: Biotechnology) 1-30, 1996.	
		Greenspan, D. C., et al., "The Evaluation of Degradability of Melt and Sol-Gel Derived Bioglass® <i>In Vitro</i> ", <i>Bioceramics</i> , 10: 391-394 (Published by Elsevier Science) 1997.	
		Greenspan, D. C., et al., "Bioactivity and Biodegradability: Melt vs. Sol-Gel Derived Bioglass® <i>In Vitro</i> and <i>In Vivo</i> " <i>Bioceramics</i> , 11: 345-348 (World Scientific Publishing Co.) 1998.	
		Grier, N., "Mercurials-Inorganic and Organic, Chapter 17" and "Silver and its Compounds, Chapter 18", <i>Disinfection, Sterilization and Preservation</i> 346-389 (Lea & Febiger, 3 rd ed.) 1983.	
		Guo, et al., "Preparation and Studies of Bioactive Glass", <i>Chemical Abstracts</i> , v.120: #144090, 1994.	
		Hench, L. L., et al., <i>Biomaterials, An Interfacial Approach</i> , (Academic Press, New York) 1982.	
		Hench, L. L., et al., "The Sol-Gel Glass Transformation of Silica", <i>Phase Transitions, A Multinational Journal</i> , 24-26: 785-834 (Gordon & Breach Science Publishers, S.A.) 1990.	
✓		Hench, L. L. et al., "The Sol-Gel Process", <i>Chemical Reviews</i> , 90: 33-72 (American Chemical Society) 1990.	
EXAMINER		- DATE CONSIDERED 6/19/02	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



RECEIVED

APR 20 2002 SHEET 4 OF 6

INFORMATION DISCLOSURE CITATION PTO-1449		ATTORNEY'S DKT No. 028870-178		TEC APPLICATION No. 09/560,475/1600/2000	
		APPLICANT David C. Greenspan et al.			
		FILING DATE April 28, 2000		GROUP 1755	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
JEP		Hench, L. L., et al., "Biological Applications of Bioactive Glasses", <i>Life Chem. Rep.</i> , 13: 187-241 (Harwood Academic Publishers GmbH) 1996.			
		Hench, L. L., et al., "Introduction to Bioceramics, Chapter 1", <i>Advanced Series in Bioceramics</i> , 1: 1-24, (World Scientific) 1993.			
		Hench, L. L., et al., "Introduction to Bioceramics, Chapter 3", <i>Advanced Series in Bioceramics</i> , 3: 41-47, (World Scientific) 1993.			
		Hench, L. L., et al., "Introduction to Bioceramics, Chapter 4", <i>Advanced Series in Bioceramics</i> , 4: 63-79, (World Scientific) 1993.			
		Hench, L. L., et al., "Introduction to Bioceramics, Chapter 13", <i>Advanced Series in Bioceramics</i> , 13: 239-259, (World Scientific) 1993.			
		Hench, L. L., et al., "Introduction to Bioceramics, Chapter 18", <i>Advanced Series in Bioceramics</i> , 18: 319-334, (World Scientific) 1993.			
		Hench, L. L., et al., "Bonding Mechanisms at the Interface of Ceramic Prosthetic Materials", <i>J. Biomed. Mater. Res.</i> , 2: (1)117-141, (John Wiley & Sons, Inc.) 1971 or 2?			
		Hench, L. L., "Bioactive Ceramics: Theory and Clinical Applications", <i>Bioceramics</i> , 7: 3-14 (Butterworth-Heinemann Ltd.) 1994.			
		Jansen, B., et al., "In vitro Evaluation of the Antimicrobial Efficacy and Biocompatibility of a Silver-Coated Central Venous Catheter", <i>J. Biomater. Appl</i> , 9(1): 55-70 (Technomic Publishing Co.) 1994.			
		Jansson, G., et al., "Stimulating Effects of Mercuric-and Silver Ions on the Superoxide Anion Production in Human Polymorphonuclear Leukocytes", <i>Free Rad. Res. Comms.</i> , 18(2): 87-98 (Harwood Academic Publishers GmbH) 1993.			
		Kawashita, M., et al., "Preparation of Antibacterial Silver-Containing Silica Glass by Sol-Gel Method," <i>Bioceramics</i> , 11: 703-706 (World Scientific Publishing Co.) 1998.			
		Keeting, P. E., et al., "Zeolite A Increases Proliferation, Differentiation, and Transforming Growth Factor β Production in Normal Adult Human Osteoblast-Like Cells In Vitro", <i>J. Bone & Miner. Res.</i> , 7(11): 1281-1289 (Mary Ann Liebert, Inc.) 1992.			
		Kelton, P. L., MD, "Skin Grafts", <i>Selected Readings in Plastic Surgery</i> , 7(2): 1-25, (Baylor University Medical Center) 1992.			
		Kim, T. N., et al., "Antimicrobial Effects of Metal Ions (A^+ , Cu^2 , Zn^{2+}) in hydroxyapatite", <i>J. Mater. Sci.-Mat. Med.</i> , 9: 129-134 (Chapman & Hall) 1998.			
EXAMINER		Kokubo, T., et al., "Solutions Able to Reproduce in Vivo Surface-structure Changes in Bioactive Glass-Ceramic A-W ³ ", <i>J. Biomed. Mater. Res.</i> , 24:721-734 (John Wiley & Sons, Inc.) 1990.			
		DATE CONSIDERED		6/19/02	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



RECEIVED

APR 23 2002 SHEET 5 OF 6

INFORMATION DISCLOSURE CITATION				ATTORNEY'S DKT NO. 028870-178		TECHNOLOGY CENTER NO. 09/560,475	
PTO-1449				APPLICANT David C. Greenspan et al.			
				FILING DATE April 28, 2000		GROUP 1755	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes No	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	Liau, S. Y., et al., "Interaction of Silver Nitrate with Readily Identifiable Groups: Relationship to the Antibacterial Action of Silver Ions", <i>Lett. Appl. Microb.</i> , 25: 279-283 (Published for the Society for Applied Bacteriology by Blackwell Science) 1997.						
	Loeffler, U., et al., "Kit for in Situ Formation of Topical Gel for Enzyme Release in Wounds", <i>Chemical Abstracts</i> , 127: 140-572, 1997.						
	Nogami, M. et al., "Glass Formation Through Hydrolysis of $\text{Si}(\text{OC}_2\text{H}_5)_4$ With NH_4 and HCl Solution", <i>J. Non-Chryst. Solids</i> , 37: 191-201 (North-Holland Publishing Co) 1980.						
	Pereira, M. M., et al., "Effect of Texture on the Rate of Hydroxyapatite Formation on Gel-Silica Surface", <i>J. Am. Chem. Soc.</i> , 78(9): 2463-2368, (Am. Ceramic Soc.) 1995.						
	Pereira, M. M., et al., "Homogeneity of Bioactive Sol-Gel Derived Glasses in the System $\text{CaO-P}_2\text{O}_5\text{-SiO}_2$ ", <i>J. Mater. Synth. Proces.</i> , 2(3):189-196 (Plenum Pub. Co. 1994.						
	Pereira, M. M., et al., "Mechanisms of Hydroxyapatite Formation on Porous Gel-Silica Substrates", <i>J. Sol-Gel Sci. Technol.</i> , 7: 59-68 (Kluwer Academic Pub.)1996.						
	Pérez-Pariente, J., et al., "Influence of Composition and Surface Characteristics on the <i>in Vitro</i> Bioactivity of $\text{SiO}_2\text{-CaO-P}_2\text{O}_5\text{-MgO}$ ", <i>J. Biomed. Mater. Res.</i> , 170-175, (John Wiley & Sons, Inc.) 1999.						
	Rabinovich, E. M., et al., "Fluorine in Silica Gels", <i>Better Ceramics Through Chemistry II</i> , 251-259 (Brinker, Clark, Ulrich, eds, Materials Research Society, Pittsburgh, PA) 1986.						
	Reese, A. C., et al., "Role of Fibronectin in Wound Healing", <i>Current Advances in Oral and Maxillofacil Surgery</i> , 1: 1-25, (no date).						
	Scalzo, M., et al., "Antimicrobial Activity of Electrochemical Silver Ions in Nonionic Surfactant Solutions and in Model Dispersions", <i>J. Pharm. Pharmacol.</i> , 48(1): 60-63 (The Royal Pharmaceutical Society of Great Britain) 1996.						
	Shapiro, L., et al., "Ciliary Neurotrophic Factor Combined with Soluble Receptor Inhibits Synthesis of Proinflammatory Cytokines and Prostaglandin- E_2 <i>in Vitro</i> " <i>Exp. Cell. Res.</i> , 215 (1): 51-56, (Academic Press, Inc.) 1994.						
EXAMINER				DATE CONSIDERED 6/19/02			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



RECEIVED

APR 22 2002

SHEET 6 OF 6
TECH CENTER 1000/2900INFORMATION DISCLOSURE
CITATION

PTO-1449

ATTORNEY'S DKT No.
028870-178APPLICATION No.
09/560,475APPLICANT
David C. Greenspan et al.FILING DATE
April 28, 2000GROUP
1755

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASSES	FILING DATE
---------------------	------------	------	------	-------	------------	-------------

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASSES	Translation Yes No
---------------------	------------	------	---------	-------	------------	-----------------------

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

SEP	Shirkanzadeh, M., et al., "Formation of Carbonate Apatite on Calcium Phosphate Coatings Containing Silver Ions," <i>J. Mat. Science, Mat. in Medicine</i> , 9: 385-389 (Kluwer Academic Publishers) 1998.
Not relevant/missing	Sing, K. S. W., et al., "Reporting Physisorption Data for Gas/Solid Systems with Special Reference to the Determination of Surface Area and Porosity" <i>Pure Appl. Chem.</i> , 57(4): 603-619 (Blackwell Scientific Publications) 1985.
SEP	Slawson, R. M., et al., "Germanium and Silver Resistance, Accumulation, and Toxicity in Microorganisms" <i>Plasmid</i> , 27(1): 72-79 (Bimonthly by Academic Press, Inc.) 1992.
↓	Stoor, P., et al., "Interactions Between the Frontal Sinusitis-Associated Pathogen <i>Haemophilus Influenza</i> and the Bioactive Glass S53P4", <i>Bioceramics</i> , 8: 253-258 (Pergamon) 1995.
↓	Stoor, P. et al., "Antibacterial Effects of a Bioactive Glass Paste on Oral Microorganisms", <i>Acta Odontol. Scand.</i> , 56:161-165 (Scandinavian University Press) 1998.
↓	Theilmann, et al, "Two -Layer Bandage Made of a Polymer and a Water-absorbing Material", <i>Chemical Abstracts</i> 112: 240557, 1990.
Not relevant/missing	Thompson, M., et al., <i>A Handbook of Inductively Coupled Plasma Spectrometry</i> , (Blackie) 1983.
SEP	Ulich, T. R., et al., "Intratracheal Injection of LPS and Cytokines, V. LPS Induces Expression of LIF and LIF Inhibits Acute Inflammation", <i>Am. J. Physiol.</i> , 267 (4, pt. 1/2): L442-446 (The Am. Physiological Soc.) 1994.
Not relevant/missing	von Nägeli, C., "Tödtliche Wirkung von angeblich reinem Wasser auf lebende Zellen", <i>Denkschriften der Schweiz Naturforsch. Ges.</i> , 33:1-10, 1893.
SEP	Vrouwenvelder, C. A., et al., "Histological and Biochemical Evaluation of Osteoblasts Cultured on Bioactive Glass, Hydroxylapatite, Titanium Alloy, and Stainless Steel", <i>J. Biomed. Mater. Res.</i> , 27: 465-475 (John Wiley & Sons, Inc.) 1993.
↓	Warren, L. D., et al., "An Investigation of Bioglass Powders: Quality Assurance Test Procedure and Test Criteria", <i>J. Biomed Mater. Res.</i> , 23(A2): 201-209 (John Wiley & Sons, Inc.) 1989.
↓	Wells, T. N. C., et al, "Mechanism of Irreversible Inactivation of Phosphomannose Isomerases by Silver Ions and Flamazine", <i>Biochemistry</i> , 34(24): 7896-7903 (American Chemical Society) 1995.
↓	Wood, S, "Case Study: Traumatic Pressure Sore of the Left Lateral Malleolus", <i>Medline, (Abstract)</i> 9315 543, 1993.
↓	Wright, J. B., et al., "The Comparative Efficacy of Two Antimicrobial Barrier Dressings: In-vitro Examination of Two Controlled Release of Silver Dressings," <i>Wounds: A Compendium of clinical Research and Practice</i> , 10(6): 179-188, (Westaim Biomedical Corp.) 1998.
↓	Zhong, J., et al., "Porous Sol-Gel Bioglass® From Near-Equilibrium Drying", <i>Bioceramics</i> , 10, 265-268 (Elsevier Science) 1997.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not.